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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/489,514

01/21/2000

S. R. Narayanan

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12/11/2001

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EXAMINER

MERCADO, JULIAN A

ART UNIT

PAPER NUMBER

1745

8

DATE MAILED: 12/11/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

15-8

**Office Action Summary**

Application No.

09/489,514

Applicant(s)

NARAYANAN ET AL.

Examiner

Mercado A Julian

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 September 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 7-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

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## DETAILED ACTION

### *Remarks*

This Office Action is responsive to Applicant's amendment filed September 20, 2001.

The rejection of claims 8-12 and 14 under 35 U.S.C. 112, second paragraph have been withdrawn.

The rejection of claims 7, 9-11, 13, 14, 18, and 20 under 35 U.S.C. 102(b) as being anticipated by Serpico *et al* (U.S. Pat. 5,677,074) has been withdrawn.

A new ground of rejection is set forth below. This Office Action is therefore made Non-Final.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 15, 16 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15 recites the limitation "the surface of the membrane" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

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Claims 16 and 19 each recites a similar limitation to claim 15 above and is rejected under the same grounds.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 7-11, 13, 14, 18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Serpico *et al* in view of the references, "Dupont Teflon PTFE 30B" and "Dupont Zonyl Fluoroadditives", hereinafter referred to as the Dupont 30B reference and the Dupont Zonyl reference.

Serpico has been discussed extensively in the previous Office Action.

Applicant's arguments regarding the prior rejection of claims 7, 9-11, 13, 14, 18 and 20 have been considered. In reply, the rejection of these claims under 35 USC § 102 are now applied for similar reasons under 35 §103 and for the additional reasons to follow.

Serpico teaches a particle size of 0.05 microns to 500 microns. While Serpico does not explicitly teach a particle size of about 1 to about 4 microns, the Dupont 30B reference is relied upon to show a particle size of about 1 to 4 microns, particularly a particle size of "about" 1 micron, e.g. 0.5 micron. Of note, the fluorocarbon polymer disclosed in Serpico's invention is the same fluorocarbon polymer disclosed in the Dupont 30B reference. (See Serpico, col. 6 line 35) Thus, the skilled artisan would have found obvious without undue experimentation to

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employ the instant size as optimization of a result-effective variable is considered routine skill in the art. *In re Aller*, 105 USPQ 233. The particle size is considered result-effective for reasons such as efficient dispersion and formation of void-free coatings. (See pg. 1 of the reference)

Additionally, in view of the Dupont Zonyl reference, the skilled artisan would have found obvious to employ a fluorocarbon polymer having a particle size of 1 to 4 microns, e.g. the MP1100 grade, for reasons such as dispersion stability and decreased surface tension, *inter alia*.  
(See pg. 5 of the reference)

Applicant submits that Serpico applies the catalyst ink at an elevated temperature and not room temperature. While this argument may have merit, the examiner notes that the claims recite "mixing", and not "applying", of the catalyst ink at room temperature. Serpico is maintained to mix the fluorocarbon polymer, water, and a catalytic material at room temperature. (Col. 6 line 25 *et seq*) It is reasonably presumed that the mixing is performed at a standard temperature, i.e. room temperature, as Serpico specifically discloses subsequent steps thereafter at higher temperatures and even slightly higher temperatures. (See col. 6 lines 41-49, lines 52-55)

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Serpico *et al* in view of the reference, "Dupont Teflon PTFE 30B and Zonyl Product Information" as applied to claims 7-11, 13, 14, 18, and 20 above, in view of Kindler (U.S. Pat. 5,992,008).

The teachings of Serpico and the Dupont reference are discussed above

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The examiner notes that Applicant submits no specific arguments against this ground of rejection as presented in the previous Office Action. The rejection of Serpico as discussed above and further in view of Kindler is herein applied as discussed in the previous Office Action.

Claims 15-17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Serpico *et al* in view of the reference, "Dupont Teflon PTFE 30B and Zonyl Product Information" as applied to claims 7-11, 13, 14, 18, and 20 above, in view of Samuels *et al* (U.S. Pat. 4,524,114).

The teachings of Serpico and the Dupont reference are discussed above

The examiner notes that Applicant submits no specific arguments against this ground of rejection as presented in the previous Office Action. The rejection of Serpico as discussed above and further in view of Samuels is herein applied as discussed in the previous Office Action.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. U.S. Pat. 4,177,159 to Singer teaches fluorocarbon polymers of 5 microns or less, U.S. Pat. 5,620,807 to Mussell *et al* teaches a catalyst ink having a small pore region.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian A. Mercado whose telephone number is (703) 305-0511.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gabrielle Brouillette, can be reached at (703) 308-0756. The official fax phone

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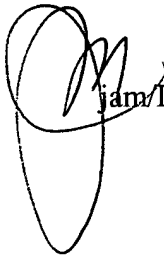
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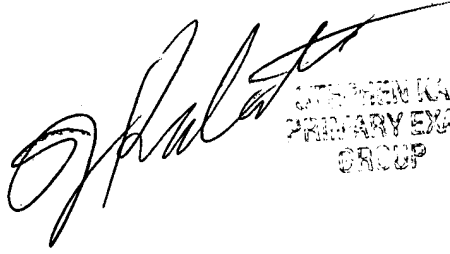
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number for the organization where this application or proceeding is assigned is (703) 305-3599.

The unofficial fax number is (703) 306-3429.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

 Jam/December 6, 2001

  
STEPHEN KALAFUT  
PRIMARY EXAMINER  
GROUP

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